

enlarged scale at the pencil G which consists of a short length of soft brass wire. The paper is carried on the drum end to which a rotational to-and-fro motion is given by the cord H, which is kept taut by the resistance of the spring I contained in the

Fig. 4.—Indicator Diagram taken from Uniflow Engine drum F.

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G

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Fig. 4 shows a diagram taken from a Uniflow engine made by Messrs. Robey & Co., Ltd.

To ascertain the mean effective pressure of the steam in the cylinder, an instrument called a planimeter is used, by which the area of the diagram is obtained. This area, divided by the length of the diagram and multiplied by the scale of the spring, gives the mean effective pressure.

When a planimeter is not available, the diagram may be divided into ten parts, as shown by fig. 5, the two

end divisions being half the width of the others.

Obviously the effective pressure on the piston is the difference between

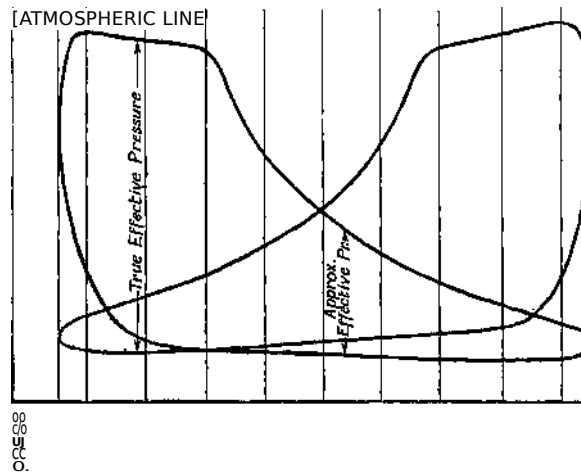


Fig. 5.—Graphic Method to obtain Mean Effective Pressure of Indicator Diagram

the absolute pressures on the steam side and the exhaust side at any instant, and is given by measuring the depth at any point between the steam line of one diagram and the exhaust line of the other. An approximate method is to take the difference between the steam and exhaust lines of *each* diagram instead of the steam line of one and the exhaust line of the other (see fig. 5). Also, when a planimeter is used, the area of each diagram is obtained